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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,951

06/22/2006

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EXAMINER

LEVINE, JOSHUA H

ART UNIT

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11/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,951	Applicant(s) OGILVIE, WILLIAM F.	
	Examiner JOSHUA LEVINE	Art Unit 4177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

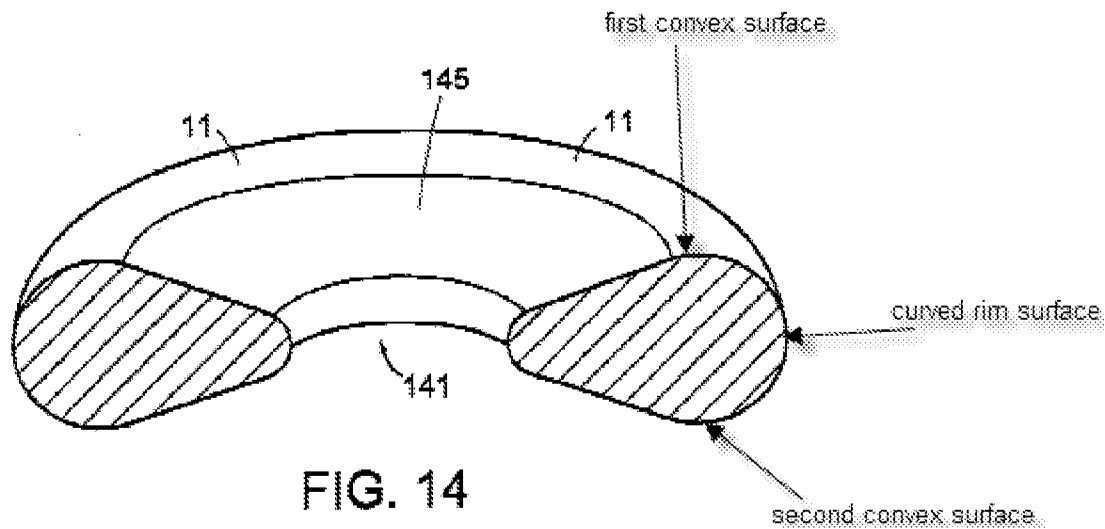
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 4-5, 9-10, 12-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Serhan et al (7004971).

3. Regarding claim 1, Serhan disclosed a disk (figure 14) which is circular in plan view (column 5 lines 53-54) and has a pair of convex spherical surfaces (figure 14) and an axial, flaring hole 141 (figure 14) which extends there through from surface to surface, said convex spherical surfaces being interconnected at their peripheries by a curved rim surface (figure 14) which is a segment of a spheroid (column 5 lines 53-54).



4. Regarding claim 2 and 10, Serhan disclosed that the axial flaring opening is a section of a torus as shown in figure 14. The axial flaring hole is circular, a circle being a section of a torus.

5. Regarding claim 4 and 12, Serhan disclosed that the radius of curvature of transition surfaces between said toroidal surface and said convex spherical surfaces is between about 0.7 and about 3 mm (column 5 lines 38-39). The device is circular so that its thickness is equal to its diameter. Therefore its 4 mm thickness would correspond to 2mm radius of curvature.

6. Regarding claim 5, Serhan disclosed that the radii of curvature of said pair of convex spherical surfaces are the same as shown in figure 14.

7. Regarding claim 9, Serhan disclosed a circular disk (figure 14) having a pair of convex spherical surfaces (figure 14) and an axial, flaring opening 141 (figure 14) which extends there through from convex surface to convex surface, said convex spherical

surfaces being interconnected at their peripheries by a curved rim surface (figure 14) which is a segment of a spheroid (figure 14).

8. Regarding claim 13, Serhan disclosed that the radii of curvature of said pair of convex spherical surfaces are the same (figure 14) and wherein said peripheral rim surface is a segment of a sphere (figure 14).

9. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Klawitter (5645605). Klawitter disclosed resecting the base of the metacarpus (column 5 lines 58-63) and the distal surface of the trapezium (column 6 lines 16-19) to provide surfaces which match the surfaces of the implant, creating passageways (column 5 line 60) by hollowing out the intermedullary canal in the metacarpus and forming a cavity in the trapezium (column 6 line 18) opening into said resected concave surfaces, and surgically implanting the metacarpal element (column 6 lines 3-6) and fitting the base of the trapezium element into bone (column 6 lines 35-37). 8. Regarding claim 9, Klawitter disclosed a CMC joint prosthesis comprising a circular disk 16 (figure 4) having convex spherical surfaces and an axial hole defined by diameter 20 and convex spherical surfaces being interconnected by a curved rim surface.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3, 6, 11, 14 are rejected under 35 U.S.C. 103(a) as being obvious over Serhan et al (7004971).

12. Regarding claim 3 and 11, Serhan discloses the claimed invention including the radius of curvature except for the radius being 15% to 30% less than the height of the disk. It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the disk with the appropriate ratios for the purpose of providing the necessary strength to the implant to resist axial compressive forces while fitting in between an upper and lower bearing surface, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

13. Regarding claim 6 and 14, Serhan discloses the claimed invention including the radius of curvature of the convex surfaces and a peripheral rim is a segment of a sphere (figure 14) except for the radius of the convex surface being twice the radius of the circular disk. It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the disk with the radius of the surface being twice that of the disk for the purpose of providing the necessary strength to the implant to resist axial compressive forces while fitting in between an upper and lower bearing surface, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

14. Claims 15-16 is rejected under 35 U.S.C. 103(a) as being obvious over Serhan et al (7004971) in further view of Klawitter (5645605).

15. Regarding claim 15, Serhan disclosed all the elements of the claim except for resecting the base of the proximal bone of the digitus and the distal surface of the carpal or tarsal bone to provide concave surfaces which match the convex surfaces of the disk, creating passageways respectively in said bones which open into said resected concave surfaces, and surgically implanting the disk. Klawitter teaches this method for a different set of bones where he resects the base of the metacarpus (column 5 lines 58-61) and the distal surface of the trapezium (column 6 lines 16-19) to provide surfaces which match the surfaces of the implant, creating passageways (column 5 line 60) in the metacarpus and the trapezium (column 6 line 18) opening into said resected concave surfaces, and surgically implanting the metacarpal.

16. Regarding claim 16, Serhan disclosed a circular disk (figure 14) having a pair of convex spherical surfaces (figure 14) and an axial, flaring opening 141 (figure 14) which extends there through from convex surface to convex surface, said convex spherical surfaces being interconnected at their peripheries by a segment of a spheroid (figure 14). Klawitter teaches resecting the base of the metacarpus (column 5 lines 58-61) and the distal surface of the trapezium (column 6 lines 16-19) to provide surfaces which match the surfaces of the implant (column 6 lines 34-37), creating passageways in the metacarpus (column 5 line 60) and the trapezium (column 6 line 18) opening into said resected concave surfaces. It would be obvious for one with ordinary skill in the art at the time of the invention to modify the reference of Serhan to include the resection method, as suggested and taught by Klawitter, for the purpose of attaching and fixating an implant to the metacarpus and trapezium.

17. Claim 17 is rejected under U.S.C. 103(a) as being unpatentable over Serhan et al (7004971) in further view of Klawitter et al (6159247). Serhan disclosed all the elements of the claim except for selecting an implant to be implanted from a set of said implants of different sizes. Klawitter et al. (6159247) teaches a metacarpal joint that comes in a variety of sizes from which to choose (column 6 lines 8-11). Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to modify the reference of Klawitter (5645605) to include the set of implants of different sizes, as suggest and taught by Klawitter et al (6159247), for the purpose of accommodating joints of different sizes.

18. Claims 18-20 are rejected under U.S.C. 103(a) as being unpatentable over Serhan et al (7004971) in further view of Klawitter (5645605) in further view of Swanson (4198712).

19. Regarding claim 18, Swanson teaches a method for repairing the joints in the wrist by passing a cord through a passageway 102 (figure 14) to stabilize the wrist and prevent dislocation (column 8 line 19-31). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the reference of Serhan and Klawitter to include the flexible cord through the passageway created in the metacarpus and the flaring axial opening and the passageway created in the trapezium, as suggested and taught by Swanson, for the purpose of further stabilizing the implant inside the bone and inhibiting dislocation of said bone.

20. Regarding claim 19, Swanson discloses a flexible cord being a harvested ECRB tendon (column 8 lines 16-19). Therefore it would have been obvious to one of ordinary

skill in the art at the time of the invention to modify the reference of Serhan and Klawitter to include the harvested tendon, as suggested and taught by Swanson, for the purpose of further stabilizing the implant inside the bone and inhibiting dislocation of said bone.

21. Regarding claim 20, Swanson a method for harvesting an ECRB tendon 120 (figure 13) near the CMC joint and where one end of the tendon stays attached (figure 13) and the other gets tied off (column 8 lines 29-30, figure 14). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the reference of Serhan and Klawitter to include the harvested tendon from the vicinity of the CMC joint, as suggested and taught by Swanson, for the purpose of further stabilizing the implant inside the bone and inhibiting dislocation of said bone.

22. Claim 8 is rejected under U.S.C. 103(a) as being unpatentable over Klawitter (5645605) in further view of Klawitter et al (6159247). Klawitter (5645605) disclosed all the elements of the claim except for selecting an implant to be implanted from a set of said implants of different sizes. Klawitter et al. (6159247) teaches a metacarpal joint that comes in a variety of sizes from which to choose (column 6 lines 8-11). Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to modify the reference of Klawitter (5645605) to include the set of implants of different sizes, as suggest and taught by Klawitter et al (6159247), for the purpose of accommodating joints of different sizes.

Response to Arguments

23. Applicant's arguments, see Applicant's Remarks, filed 7/29/2008, with respect to claims 1, 9 and 16 have been fully considered and are persuasive. The rejections 1-6 and 9-20 have been withdrawn and new art rejections have been applied.

24. Swanson teaches that a cord could be passed through a passageway in the bone. Klawitter disclosed such passageways. When the cord of Swanson is passed the resections of Klawitter, the flexible cord passes through two surfaces (metacarpal surface and trapezium surface) that articulate with each other.

25. The rejections of claims 7-8 and 15 stand as they are not addressed by the applicant.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA LEVINE whose telephone number is (571)270-5413. The examiner can normally be reached on Monday-Thursday 7:30am-5:00pm ETA.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Isabella can be reached on 571-272-4749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4177

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOSHUA LEVINE/
Examiner, Art Unit 4177

/Paul B. Prebilic/

Primary Examiner, Art Unit 3774